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RUDOLF BALOGH

TWO GENERATIONS DISPLAY HOME PRODUCE TO CELEBRATE BALATON'S HARVEST

Grasping a bunch of grapes, native, like herself, to the Lake Balaton region, this Hungarian child is decked out to celebrate the harvest. Her all-enveloping bonnet, like her mother's flowered headkerchief, is traditional headgear of the province, not simply the latest style in hats. The mother's bodice of brocaded silk, elaborately banded and edged with embroidery, probably was woven of home-grown silk. Production of silk is a local industry. On the hill slopes of the lake grow mulberry trees which provide fodder for silkworms. The fertile land traversed by the Sió Canal (Bulletin No. 5) is a garden spot of orchards and grainfields. Non-agricultural products which the canal will carry are bauxite and oil. Hungary is a leading source of bauxite, the ore from which aluminum is processed.

Bulletin No. 1, December 1, 1947

Sea Dominates Lives of Newfoundlanders

NEWFOUNDLAND, which has been offered province status within the Canadian Federation, is the oldest of British Empire holdings and one of the first "discoveries" of the air age. The sea remains, however, a vital element in the life of the big island and its vast, little-explored mainland dependency, Labrador.

The sea's influence has crept even into everyday language. A "banker" in Newfoundland is not a financier, but a fishing vessel operating off the "banks." To "ship" is to take any kind of employment. Instead of "getting married," a couple is "given the breeze."

Peace or War Base

A little larger than Ohio, Newfoundland lies just off the easternmost point of North America. The closest New World soil to Europe, the island was an early stop on overseas air lines. It became an Allied base in World War II, and a vital way station for the thousands of warplanes ferried to Great Britain.

Since the war, this northern land of moose and caribou, of lonely spruce forests and scattered fishing settlements, has developed into a leading crossroads on the world's commercial and military air lanes. The United States has a 99-year lease on bases there.

Newfoundland was the first New World land discovered in 1497 by the English-hired Venetian navigator, John Cabot. Its possession gave the British not only their first foothold in the Americas, but it also established a permanent "fishing ship" moored near the world's richest codfish grounds—the Grand Banks.

Fishing still offers a basic living, subsistence, and industry for the now slightly more than 300,000 inhabitants of Newfoundland and Labrador. The island's codfish catch (illustration, next page), dried, salted, and frozen, long provided the nation's leading export.

Forests Provide Wood Pulp, Shelter, and Ships

In recent decades, the timber, pulp, and paper industries, together with mining, have grown up to challenge the old fishing business.

Like the palm trees of South Sea islands, Newfoundland's extensive forests have provided shelter, ships, and raw materials for the people of this northern region. The first newsprint mill was established in 1909.

Mining operations had been started earlier, around the middle 1800's. To the pioneer copper developments, iron production was later added. Lead, zinc, and a little gold and silver are also mined.

All three major activities, however, were not enough to support the island during the depression years of the 1930's. At that time, Newfoundland, with Labrador, gave up independent dominion status in return for financial assistance from Great Britain, under a parliamentary commission responsible to the Crown.

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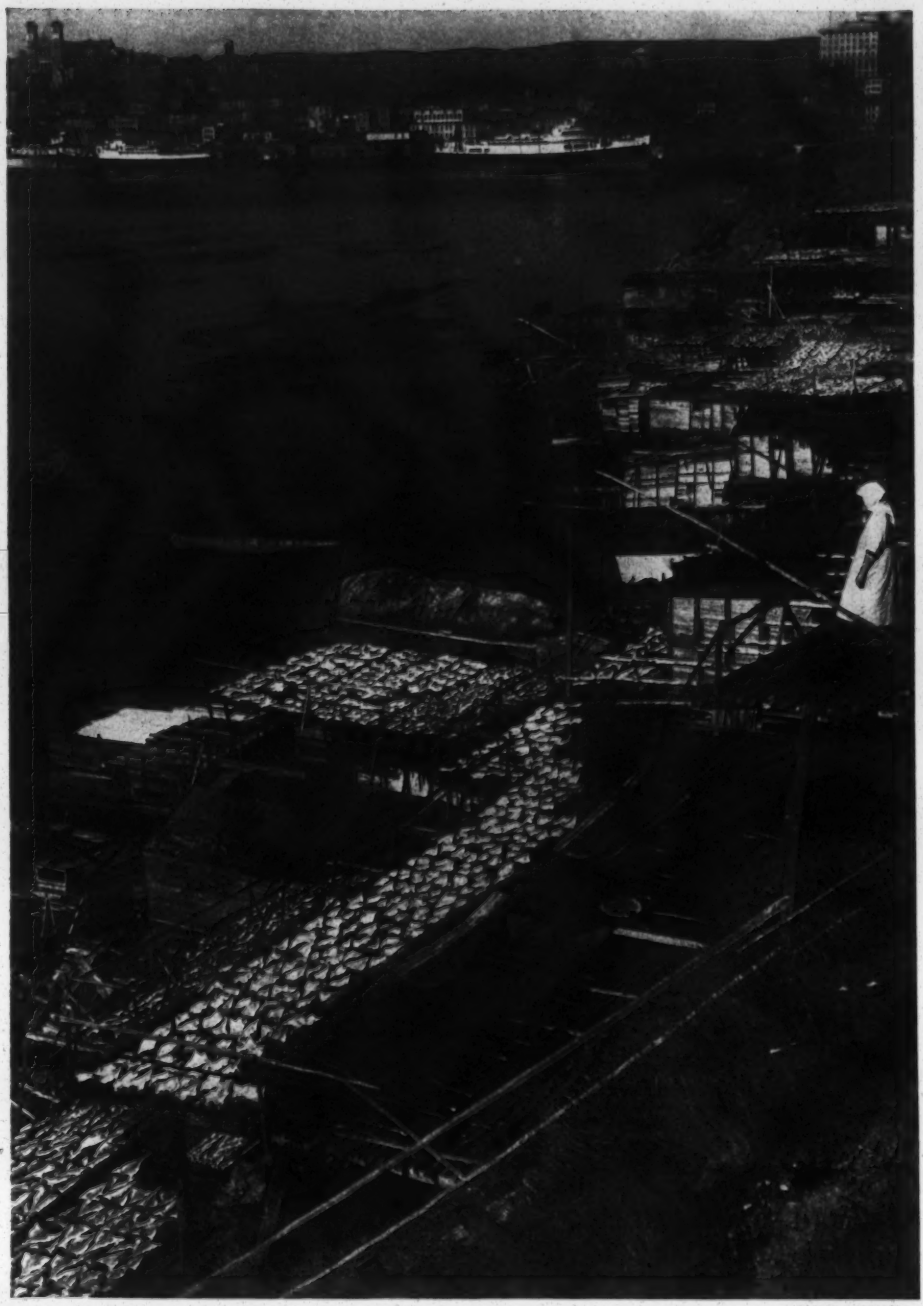

GUSIAV ANDERSON

SPLIT AND SALTED CODFISH DRY IN THE SUN AT ST. JOHN'S, NEWFOUNDLAND'S CAPITAL

These brushwood drying racks are called "flakes." Those in the foreground hug the shore at the foot of the Battery, a steep hill from which cannon once commanded the bay. Liners in background connect the "island of fishermen" (Bulletin No. 1) with Halifax, Boston, and Liverpool.

Bulletin No. 2, December 1, 1947

Sinkiang Squeezes Last Drop from Streams

RAINDROPS are rare as pearls in China's far-inland Sinkiang province, where revolting Ili tribesmen near the border of the Soviet Union have demanded self-government. Consequently, Sinkiang farmers know how to make the most of scarce water from streams.

Rainfall reaches its maximum of 20 to 30 inches annually on the north slopes of the high Tien Shan, or Heavenly Mountains. This range stretches east and west for 1,000 miles across Sinkiang's center, separating Asia's driest desert, the Takla Makan, on the south, from the dry basin of Dzungaria, on the north.

Most Remote from Oceans

Around Yarkand, city of 75,000 on the southwestern edge of the Takla Makan, rain averages half an inch a year—equivalent to one good 20-minute Appalachian shower.

Called the most remote from oceans of all the world's land, Sinkiang is separated by the world's highest mountains from the nearest open water, the Bay of Bengal, 1,000 miles south. Weather records show that most of the province's moisture is wafted all the way from the Atlantic Ocean, 4,000 miles west.

Sinkiang means "new dominion" in Chinese. High mountain ranges hem it in on the south, west, and north. Desert stretches complete its isolation on the east, making the Alaska-size area a natural buffer among China, India, and the Soviet Union. It is known also as Chinese Turkistan, Chinese Tartary, and Kashgaria—the latter after Kashgar, largest city and ancient silk-route center at Sinkiang's western edge.

Despite its natural isolation, Sinkiang holds the logical land routes between Europe and China. These routes linked ancient Rome with China, carried Buddhism from India to China, and transported supplies in World War II after the Burma Road was severed by the Japanese. Kuldja, center of the Ili tribal territory, and Urumchi (Tihwa), the provincial capital, are important stops on the automobile road joining China with the west. So far, Sinkiang has no railroads.

Only One-tenth of Population Is Chinese

Khan Tengri, a 23,620-foot peak of the Tien Shan at the province's western border, and the Turfan Depression, a dry basin that touches 940 feet below sea level near the eastern end of the range, provide unusual land extremes. Farming and livestock raising on the edges of the deserts close to the mountains occupy most of the 4,300,000 inhabitants.

Only one-tenth of the province's population is Chinese. Most of the people are Turki tribesmen or others of ancient Persian stock and Mohammedan religion (illustration, next page).

Mountain streams by the hundred flow north off the Tien Shan onto the Dzungarian Plain, and south onto the Tarim Basin, which includes the Takla Makan. Most of them are fanned out into irrigation ditches to support little farm areas before they disappear completely in the sand.

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The present offer of union with Canada is one of several alternatives —including continued rule by the commission or renewed dominion status. Newfoundlanders will later determine their political future by vote.

Newfoundland's capital and chief city, St. John's (illustration, inside cover), is situated on the rugged east coast. Its rock-framed harbor has been described as a "miniature Golden Gate." The only settlement of any size on the island, St. John's has a population of about 63,000. During the war, thousands of Americans were stationed there.

NOTE: Newfoundland is shown on the National Geographic Society's map of Canada, Alaska, and Greenland, which appeared as a supplement to the June, 1947, issue of the *National Geographic Magazine*. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For additional information, see "Newfoundland, North Atlantic Rampart," in the *National Geographic Magazine* for July, 1941; and "The Sealing Saga of Newfoundland," July, 1929.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, March 25, 1946, "Newfoundland's Sealing Fleet Sails Again."

WALLENBERG FROM THREE LIONS

WHEN THE BARREL MILL IS REVOLVED THESE ROCKS GRIND COD HEADS TO A PULP

Such homemade devices reflect the Newfoundlander's thrift and industry. The meal that these mills produce from fish heads makes feed for hogs. The man turns the barrel with the aid of a hand crank.

Bulletin No. 3, December 1, 1947

Hampton Roads Teems as Coal, Tobacco Port

VIRGINIA'S Hampton Roads, spacious anchorage for fighting vessels since the early days of the United States Navy, exports leaf tobacco in far greater volume than any other American port. But coal, not tobacco, is the big reason why this four-city harbor in recent months compiled a top export tonnage among United States ports.

Norfolk, Portsmouth, Newport News, and Hampton cluster around the broad, deep roadstead through which the James, Nansemond, and Elizabeth rivers enter the lower Chesapeake Bay. They comprise a commerce-teeming community of close to half a million people and provide 20 miles of developed water front on the harbor's 50-mile rim.

Most Coal Shipped to Northeast Cities

Large as is the traffic in tobacco and tobacco products, grain, lumber and logs, cotton, textiles, paper products, and chemicals, 95 percent of current export is coal. The coal flow now runs at about the 20,000,000-ton total of prewar years, which at times exceeded the combined coal shipments of other Atlantic-coast ports.

Three-fourths of the coal tonnage normally moves coastwise, particularly to the cities of the northeastern United States. One-eighth or more is shipped to foreign ports, and the remainder goes into the bunkers of ships in the harbor.

Three of the eight railroads which enter the Hampton Roads area are devoted almost exclusively to bringing coal from the vast bituminous fields centered 400 rail miles inland from the port in mountainous West Virginia. A belt line, owned equally by the eight trunk lines, expedites freight distribution among the terminals, factories, and warehouses of the inlet-indented port.

Sheltered and always ice-free, Hampton Roads has a mean annual temperature of 59.4 degrees, and a tide rise of only two and one-half feet. Central in location among Atlantic-coast ports, it can accommodate 50 ocean vessels at its piers at one time.

East Coast Navy Center

Hampton Roads, never crowded despite unceasing traffic of freighters, liners, tankers, trawlers, warships, submarines, cabin cruisers, and the rest, ranks as the finest natural harbor between New York and Rio de Janeiro. More than 10,000 ship arrivals and departures are recorded each year at Cape Henry (illustration, next page)—the nautical gateway to Baltimore and Washington as well as to Hampton Roads.

Shipbuilding plants at Newport News grew with the port and contributed important tonnage in two world wars. The Navy Yard at Portsmouth and the Naval Operating Base directly on the roadstead at Norfolk stand as factors in the harbor's maritime importance. The Navy Yard is the nation's oldest. Units of the vast naval plant include a fuel reserve depot, a naval air station, and a submarine base.

In Hampton Roads, on March 9, 1862, the Federal *Monitor* and the

The most important oases formed by water from the mountains support crops of wheat and corn, rice, cotton, beans, and melons. Export trade is largely with the Soviet Union and is dominated by livestock, wool, furs, and skins. Petroleum, scarce in China, is among Sinkiang's resources, along with iron, coal, copper, lead, sulphur, and gold.

NOTE: Sinkiang appears on the Society's map of China.

For further information, see "With the Nomads of Central Asia," in the *National Geographic Magazine* for January, 1936; "From the Mediterranean to the Yellow Sea by Motor," November, 1932; "First Over the Roof of the World by Motor," March, 1932; and "On the World's Highest Plateaus," March, 1931.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, November 26, 1945, "Sinkiang Is Mid-Asian Land of Mountains, Deserts, and Oases"; and "Reclaimed Sinkiang Is China's Wild West," December 13, 1943.

MAYNARD OWEN WILLIAMS

WHILE MOTHER WORKS IN THE FIELD, BABY CANNOT ROLL OUT OF ITS PORTABLE CRIB

Both are wrapped warmly against the cold of the Sinkiang highlands. Elevations, and temperatures, are either high or low in this northwest China province where mountains alternate with deserts. This mother and child live in Murtuk, a village about midway on the course of a short river flowing from the Tien Shan to the Turfan Depression. The villagers utilize most of the stream's water and what is left flows on to lose itself in the hot basin reaching more than 900 feet below sea level.

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Bulletin No. 4, December 1, 1947

Air Mail Expands Market of Air-Grown Orchid

ORCHIDS, which once teamed up with sable and diamonds to symbolize fabulous riches, have become so plentiful in florists' shops in recent years that women of moderate means now wear them to celebrate an anniversary or an especially festive holiday.

A few years ago, orchids were beyond the dreams of the average bride. Today, one of these fantastic flowers is often added to the more usual roses or lilies of the valley to form a bridal bouquet.

Flown from Summer to Winter at Holiday Season

A decade ago, an estimated 400,000 of the exotic cut blooms were sold annually by florists in the United States. One New Jersey grower alone, among a score of large commercial producers, has estimated that this year he will cut more than half a million hothouse orchids of various tropical species.

During the Christmas season, air freight brings orchids in 48 hours from their humid jungle homes in South America to be worn by holiday makers in the crisp winter weather of North American cities. Occasional planeloads of orchids are flown to New York from greenhouses in the Netherlands.

In the hot jungle lowlands of Colombia, Venezuela, and Brazil (illustration, next page), orchids bloom in profusion high in forest trees. Quantities of them grow in the wilds of tropical Africa and the islands east of that continent. Tropical regions of Asia and neighboring islands, including the Philippines, New Guinea, and Borneo, and in Australia, produce thousands of species of the gorgeous blossom.

Orchids are not the parasites they are generally reputed to be, however. Although a single plant may spread for 50 feet along a tree trunk or limb and carry more than 100 blossoms, it lives on air. Spongy aerial roots absorb dust and moisture for its nourishment.

Most of the orchid blooms of commerce are the result of five or more years of patient, scientific hothouse culture from seed. After two to eight months in flasks of agar solution, the tiny seedlings are transferred to pots of soft moss and charcoal or similar materials which insure good drainage and circulation of air.

Popular Orchid Named for English Botanist

In shipping cut orchids to market, each bloom is given plenty of space in the container. Each stem is inserted through a rubber cap into a slim glass tube of water. Fragile as the flowers appear to be, they stay fresh for a week, with good care. Orchid blossoms left on the plant sometimes last as long as ten weeks.

Dominating the orchid shows are the *Cattleyas*, named for William Cattley, an English botanist. Perhaps the most frequently worn as a corsage is the *Cattleya labiata*. The sepals and petals of this species are the pinkish-lavender known as "orchid" and the labellum—the trumpet-shaped tube around which the petals cluster—is a deep rosy

Confederate *Virginia*, or *Merrimac*, fought the first duel between armored men-of-war. For four hours they slugged it out at close range without decisive result except to set the fashion of armor plate and revolving turrets for warships. Three months before Lee surrendered, President Lincoln met Vice-President Stephens of the Confederacy at Hampton Roads to arrange peace between North and South, but the conferees failed to agree.

Out through Hampton Roads, in 1898, inventor Simon Lake piloted the pioneer submarine, *Argonaut I.*

NOTE: Hampton Roads may be located on the Society's map of the Southeastern United States.

For additional information on the Hampton Roads region, see "Exploring America's Great Sand Barrier Reef," in the *National Geographic Magazine* for September, 1947; and "Virginia—A Commonwealth That Has Come Back," April, 1929.

JOHN E. FLETCHER

MARINERS BOUND FOR HAMPTON ROADS MAKE THEIR FIRST LANDFALL AT VIRGINIA'S CAPE HENRY

For more than a century and a half these two lights have guided ships into the entrance of Chesapeake Bay. The old stone lighthouse was the first ever erected by the federal government. The new one, built of iron, has served since 1881. Fifteen miles west, Willoughby Spit and Old Point Comfort mark off Hampton Roads from the open bay and provide one of the world's most spacious anchorages.

Bulletin No. 5, December 1, 1947

Hungarian, Greek Canals Improve Transport

HUNGARY'S newly completed Sió Canal, and Greece's Corinth Canal, undergoing repairs of wartime destruction, will greatly improve southeast Europe's transport situation.

The Sió Canal, linking Lake Balaton with the navigable Danube (Duna), taps a rural region which in recent years has turned up increasing resources in oil and bauxite. The Greek artery saves hundreds of miles for the steamer run between the Adriatic and Aegean seas.

Hungary's new waterway crosses the southwest corner of the country between Lake Balaton and the Danube and Drava rivers that loop around it. This area is a many-sided land of whitewashed villages and feudal castles, of vineyards and vacation resorts (illustration, next page).

Summer or Winter Sports on Lake Balaton

Lake Balaton, along the northern edge of the region, is the playground "sea" of landlocked Hungary. The 50-mile ribbon of blue water is framed on one side by the wooded Bakony Hills and on the other by beaches of soft, fine sand.

The lake is surrounded by resort towns, fishing hamlets, and luxurious villas. In summer, yachts and fishing craft dot its shallow waters. In winter, its frozen surface provides a huge arena for skaters and the followers of an odd sport called the "wooden dog," in which small sleighs, pushed by iron ski-sticks, make surprising speeds.

On the southeast shore of Balaton, the town of Siófok, called the Hungarian Coney Island, is the lake port of the now canalized Sió River. From Siófok, the river flows southeastward toward the Danube through a broad fertile plain of grainfields and stock farms.

There, in thatched cottages or manor houses, are still found the old carved cabinets, bright tapestries, and great, soft feather beds which have been handed down through generations of Hungarian families. Festival time finds village dancers spinning to gypsy tunes in traditional costumes of stiff pleated skirts and embroidered jackets (illustration, cover), in turned-up hats and high polished boots. Old betrothal and marriage customs linger.

Germans Dynamited Corinth Canal

The extensive deposits of bauxite ore which give Hungary a leading spot among the world's sources of aluminum are situated in the vicinity of Siófok. It is estimated that about a third of the canal's heavy cargoes floating to the Danube will be made up of bauxite. Other cargoes will include Balaton fish, building materials, fruits, grains, and oil.

Practically every type of seagoing cargo will be shipped through the Corinth Canal when the present reconstruction work is finished.

Straight as an arrow, the four-mile-long canal slashes a rocky isthmus east of the Gulf of Corinth. Germans retreating from the Peloponnesus, south of the gulf, closed the man-made stream by dynamiting its towering walls and causing landslides. They also wrecked the great bridge which crossed it. A Bailey bridge has temporarily replaced the ruined span.

UMI

purple. Touches of gold splash upward from the base of the labellum.

The orchis family, which numbers about 400 distinct plant kinds, and an estimated 15,000 species, is one of the most widespread in the world. In spite of this broad distribution, it is seldom that many plants are found in one place. The epiphytes, or air-root varieties, grow in tropic lowlands the world around. The ground orchids, some with potato-like bulb roots, grow on higher ground from the Equator to the cool extremes of the temperate zones.

There are perfect orchids as small as pearls, and giants with eight-foot blossom spikes. Brilliant scarlet mixes with gold and green in a single flower. Small white ones with red and yellow centers grow in fluffy clusters. Orchids in shape suggest delphinium, iris, columbine, butterflies, and even spiders, frogs, and monkeys.

In some countries, you can eat your orchid and have it, too. Nyasaland natives make a food staple of a ground-orchid root resembling a small potato. "Mayflower tea," brewed from orchid petals, is good and good for you, according to the Venezuelans. Vanilla flavor comes from the dried seed pods of the vanilla orchid.

NOTE: Lands where orchids grow may be located on the Society's World Map.

LUIS MARDEN

TO BRAZILIAN GIRLS, ORCHIDS COME NOT SINGLY BUT IN GARLANDS

A North American girl may jokingly wish to be "covered with orchids," but that form of drapery is a reasonable possibility for her cousin of the south. These young women of São Paulo wear the cherished blossoms as casually and as profusely as a North American might tuck daisies in her hair in May. In Brazil, where jungle vines burst into orchids of myriad shapes, sizes, and colors, these flowers serve not only as feminine adornment, but as ballroom decorations. They are used by the thousand, while such flowers as cluster chrysanthemums and "greens" are party trimmings in North America.

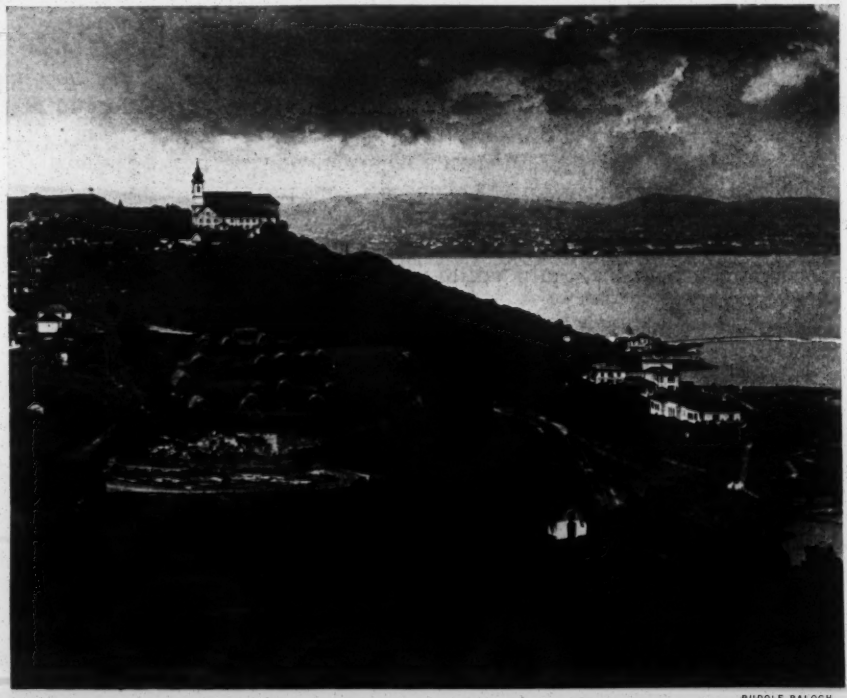
The canal's greatest value is to ships plying between the Adriatic and Piraeus, the port of Athens east of the isthmus. A prolonged journey around the Greek peninsula is saved, and rough seas are avoided. Just before World War II, nearly 7,000 steamers and 900 sailing vessels transited the canal in a year.

In ancient times, husky Greeks dragged their ships across the isthmus. Caesar, Nero, and Hadrian dreamed of building a canal there; Nero even started one. But it was not until 1893 that a waterway actually was completed.

At some points, the rock layers rise sharply for 250 feet above the water line. Long before the Germans bombed the canal and planted explosives in it, the high, steep banks had a tendency to slip because of earthquakes.

NOTE: Routes of the Corinth and Sió canals may be traced on the Society's map of Central Europe and the Mediterranean.

For additional information about the regions traversed by these waterways, see "Greece—the Birthplace of Science and Free Speech," in the *National Geographic Magazine* for March, 1944; "Hungary, a Kingdom without a King," June, 1932; "New Greece, the Centenarian, Forges Ahead," December, 1930; and "Cruising to Crete," February, 1929.



RUDOLF BALOGH

TIHANY'S TREE-GROWN SLOPES LEAD DOWN TO BALATON, CENTRAL EUROPE'S LARGEST LAKE

Once a fortress against the Turks, more recently refuge (or prison) for abdicating King Charles IV, Tihany Abbey crowns a promontory which extends into Lake Balaton from its northern shore. The volcanic soil of the hill is especially suitable for grape growing, as is that of the entire area through which the Sió Canal flows to link the Danube with the Drava. This region of western Hungary is famous for its wines. The placid appearing lake is capable of tossing up such violent waves that the small steamers which normally zigzag from town to town are forced to remain at their home docks.